



Lesson Preparation Book Computer

1st.Sec – First Term 2023 - 2024



Prepared and Designed by/ Yasmin Shoaeb - جروب فريق أصدقاء الكمبيوتر المتخصص

Teacher's Biography

Name:

School:

The educational administration:

Qualification:

Teaching Subject:

Comprehensive School:

The school to which he is delegated:

Date of appointment:

The job is on the staff:

Teacher Code:

Mobile Number:

Teacher

Supervisor

School Principal

Daily class schedule

Session Day	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eightieth	Ninth
Saturday									
Sunday									
Monday									
Tuesday									
Wednesday									
Thursday									

Session Day	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eightieth	Ninth
Saturday									
Sunday									
Monday									
Tuesday									
Wednesday									
Thursday									



























Teacher

Supervisor

School Principal

The General Objectives of Computer

At the end of the second term the student will be able to:

-   Using problem solving technique to create an '(Electronic Arabic Atlas)'.
-   Manipulating data through the operating system and the Internet.
-   Creating a database using one of the Spreadsheets Applications.
-   Creating and employing multimedia files.
-   Establishing Project's interface and adjusting its properties.
-   Using Visual Basic. Net language to display Project's data.
-   Writing Project's codes and, other codes to play and stop multimedia files.
-   Create and processes audio files through some audio editing and processing programs.
-   Create and processes video files through some video editing and processing software.
-   Create a communication channel between databases and software
-   Initialize and recalls image, audio and video files within the software
-   Uses one of the SQL statements(Select)
-   Employ image, audio and video files within the software

Teacher

Supervisor

School Principal

The specified objectives of computer

At the end of the second term the student will be able to:

- ✖ ✖ Define multimedia, its types, and its advantages.
- ✖ ✖ Identify problem solving stages
- ✖ ✖ Define Project's Problem
- ✖ ✖ Download one of the (Electronic Arabic Atlas) programs available on the Internet.
- ✖ ✖ Recognize what is data management.
- ✖ ✖ Recognize what are search engines.
- ✖ ✖ Create folders.
- ✖ ✖ Save files inside folders.
- ✖ ✖ Collect data from (the Internet and other multimedia).
- ✖ ✖ Add keywords for searching using search engines.
- ✖ ✖ Identify Database files.
- ✖ ✖ Create a new Workbook.
- ✖ ✖ Enter data in a worksheet in the Workbook.
- ✖ ✖ Save the new Workbook.
- ✖ ✖ Identify some Image Editing software.
- ✖ ✖ Distinguish between different kinds of image files.
- ✖ ✖ Download image files from the internet.
- ✖ ✖ Modify picture's size.
- ✖ ✖ Add effects to picture
- ✖ ✖ Crop a part of a picture.
- ✖ ✖ Save picture files with different extensions.
- ✖ ✖ Design images for the background of the project.
- ✖ ✖ Explain what animated Picture means.
- ✖ ✖ Identify some audio files formats (extensions).
- ✖ ✖ Download one of the sound editing programs.
- ✖ ✖ Add effects on audio waveforms.
- ✖ ✖ Save audio files with appropriate format (extension)
- ✖ ✖ Download one of video editing software from the Internet. extension).
- ✖ ✖ Identify the purpose of designing and creating a project.
- ✖ ✖ Design a user interface for the project.
- ✖ ✖ Specify the controls that you want to use in the user interface.
- ✖ ✖ Set the properties of the controls.
- ✖ ✖ Add a control to the Toolbox.
- ✖ ✖ Write the code required to retrieve data from an Excel sheet,

Teacher

Supervisor

School Principal

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Lesson 1

An Introduction to the Project

Learning Objectives:	Strategy
By the end of the lesson, the student should be able to:	Brain storming – Dialogue and discussion Critical thinking
<ul style="list-style-type: none"> Collaborate with his colleagues to define project's requirements Define Atlas Types. Define project's requirements 	Teaching aids
	Electronic board – Student's Book – – presentation– Printed Atlas

Warm up / What the meaning of electronic atlas?

Lesson Presentation

Meaning of Atlas: -

A way to explore the world through a book display geographic maps, and related to a specific topic like continents and countries.

Examples of such Atlas: -

World Atlas, Atlas of Africa.

What you need to create electronic Arabic atlas: -



The word Atlas

- Text data:

Continents names, countries name in each continent. Data about each country (its capital, main ports, its flag, its location on the map, water resources, national anthem, touristic attractions)

- Graphical data ((images and, animated pictures)).

Graphical data includes: Continents – countries – capitals – the flags of Arab countries – touristic attractions.

- Sound Data

Sound data; such as the national anthem of the country and audio narration accompanying some sections in the project

Requirements for creating an (Electronic Arabic Atlas):

- 1- Data in various formats.
- 2- Programs and devices required to produce data in multimedia format.
- 3- Programming languages to be used.



Evaluation: -

Complete:A way to explore the world through a book display geographic maps

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Lesson 2

Following an Introduction to the Project

Learning Objectives:	Strategy
By the end of the lesson, the student should be able to:	Brain storming – Dialogue and discussion problem solving
<ul style="list-style-type: none"> Define multimedia, its types, and its advantages. Identify problem solving stages. Download one of the (Electronic Arabic Atlas) programs available on the Internet. 	Teaching aids
	Electronic board – Student's Book – – presentation

Warm up / What are the problem solving stages?

Lesson Presentation

Multimedia: - is composed of two parts: the first part is (**Multi**) and means multiplicity, and the second part is (**Media**) and it means media carrying different information such as (audio, image and video)

Advantages of Multimedia in Education

- 1-Saving the time and effort for both teacher and learner.
- 2-Making learning process enjoyable and interesting.
- 3-Grabbing attention of information presented, which facilitate understanding.
- 4-Providing a diversity of methods to display information which stimulate audio-visual senses.

Multimedia Elements

1. **Data or Information:** - It can be: -Text - Image or Picture - Sound - Video Clip.

You can get this data and information through the Internet or other devices used for this, and you can also display and handle this data.

2. **Hardware:** - is the necessary devices used to handle data and information of different types, from these devices the Scanner, Digital recorders and, Digital Camera.

3. **Software:** - is the set of programs and applications used to handle data and information such as: Movie Maker Program - Sound Recorder program - Windows Media Player program.

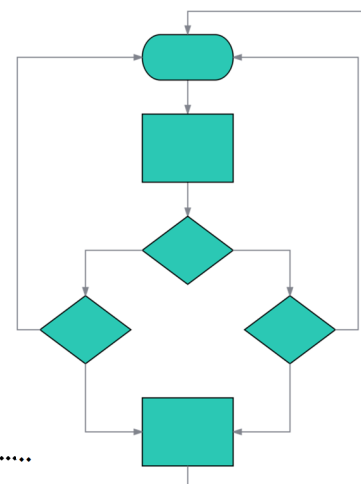
You may face some problems during the execution of project's stages.

Problem solving stages: -

- 1- Problem **Definition**
- 2- Determine the **Outputs**
- 3- Determine the **Inputs**
- 4- Develop an **Algorithm**
- 5- Computer **Coding**
- 6- Program **Testing** and debugging
- 7- Program or Project **Documentation**

Evaluation: -

Complete: Problem solving stages.....,,



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Lesson 3

Managing Project's data

Learning Objectives:	Strategy
By the end of the lesson, the student should be able to:	Brain storming – Dialogue and discussion practical training
<ul style="list-style-type: none"> Different between files and folders. Create project's folders. Understand the importance of organizing project data in folders. 	Teaching aids Electronic board – Student's Book – – presentation

Warm up / How can create and rename project's folders?

Lesson Presentation

Operating system can manage files and folders stored in storage units. The most important operations carried out by the operating system for managing files and folders are as follows:

Create (Folder- File): –Right-Clicking with the mouse in free place on the Desktop, opens a shortcut menu; from which you choose the command **New** then **Folder** and; so a new folder is created with the name you specified

Naming (Folder- File): – Select a folder; and display its shortcut menu from which; choose the command **Rename**; to give a new name to the specified folder

Delete (Folder- File): – Select a folder; and display its shortcut menu from which; choose the command **Delete**; to delete the specified folder.

Search through the Internet:

The Internet provides many services, including the search service, through which we can search for different types of information (**digital- audio- text- images**) the search of information is done by using **keywords**.

There are many internet sites that offer search services, called **Search Engines**.

Search Engines:

- Search Engine www.google.com
- Yahoo Search Engine www.yahoo.com
- AltaVista Search Engine www.Altavista.com

We can use the search engines for searching information through the Internet, and saving this information on the computer, or we can copy from the Internet, and paste it in a document on the computer.

Download the file (voice- video- image): –

- We use the appropriate search engine.
- We specify the keyword "خريطة مصر" or "Egypt map."

Then we identify the type of information required (images or maps).

- Finally, we save the map as an image file into one of the Folders that have been created.
- You can search for all the required types of files within the project (Sound – Image-Video) download and store it inside the folders.

Evaluation: -

Complete: One of Search Engines

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Lesson 4

Following Managing Project's data

Learning Objectives:	Strategy
By the end of the lesson, the student should be able to:	Brain storming – Dialogue and discussion practical training
<ul style="list-style-type: none"> Identify electronic encyclopedia. Looking for information using electronic encyclopedia. Understand the importance of organizing project data in folders. 	Teaching aids Electronic board – Student's Book – – presentation

Warm up / What the meaning of encyclopedia?

Lesson Presentation

🌟 **Encyclopedia:** - is a distinct type of reference that shows a structured summary of knowledge in a particular field, and is arranged in accordance with a certain classification; that facilitates searching of required information such as: alphabetic order.

🌟 **Importance of encyclopedia:** -

→ It provides an overview of one of the topics and the facts accompanied with articles, tables, images, forms, maps and bibliographic sources.

→ Encyclopedias are characterized by the diversity and huge amount of different types of information displayed, and the easiness of searching and quick access.

🌟 **Among the most important encyclopedias the Wikipedia:** -

→ http://en.wikipedia.org/wiki/Main_Page

→ <http://ar.wikipedia.org/wiki/>

🌟 **Search inside electronic encyclopedia:** -

search through the Internet (using appropriate keywords); for the files: (**Map – flag – National Anthem** –) that belong to the countries specified in the project, Then save these files in the folders which created.

🌟 **Organizing encyclopedias:** -

There are two ways to organize information contained in encyclopedias:

– **Sorting by alphabet.**

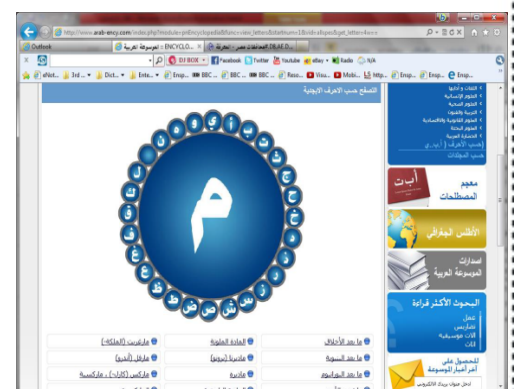
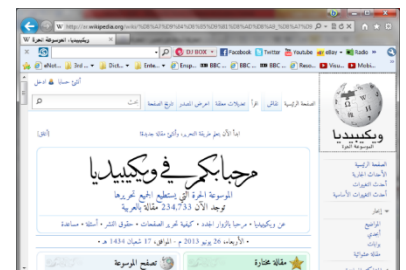
– **Sorting by scientific classification or by topics.**

We can search through electronic encyclopedias for the required information

Evaluation: -

Put (✓) or (x):

Wikipedia's are sorted ascending or descending ().



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Lesson 5

Collecting Project's data

Learning Objectives:	Strategy
By the end of the lesson, the student should be able to:	Brain storming – Dialogue and discussion practical training
<ul style="list-style-type: none"> Identify Database files. Create a new Workbook. Enter data in a worksheet in the Workbook. 	Teaching aids
	Electronic board – Student's Book – – presentation

Warm up / What the meaning of Spreadsheets applications?

Lesson Presentation

Spreadsheets applications: –

- Spreadsheets applications are programs designed for collecting data in an organizing way.
- You can enter and, manage data easily; you can also retrieve the enquired information
- We use Spreadsheets applications to manage a large amount of data through datasheets or worksheets easily, quickly and accurately.

Spreadsheets: –

A spreadsheet is a workbook made up of many different worksheets or spreadsheets.
A spreadsheet consists of columns and rows; it is made up of cells.

Cell: – is the intersection of each row and column.

Columns: – The columns headers are identified by alphabet letters: 'ABC,...'. These letters are used to specify the location of each column.

Rows: – The rows headers are identified by numbers: '1,2,3,.....'. these numbers are used to specify the location of each row.

The number of worksheet columns and rows vary according to the Spreadsheet application version.

There are three basic types of data that can be inserted in the table cells, they are:

- Text data (letters or texts)
- Numeric data (numbers)
- Formulas (mathematical formulas).

The Table is formed of:

A group of Rows and a group of Columns; where: Each **Row** represents a **Record**, and each **Column** represents a **Field**, and each Field contains Data.

Evaluation: -

Put (✓) or (x):

Spreadsheets program can be used to create a database ().

(Columns) أعمدة	↓	↓	↓	
	اسم الدولة	عاصمتها	أهم موانئها	
صفوف (Rows)	مصر	القاهرة	الأسكندرية وبورسعيد	←
	السعودية	الرياض	جدة	←
	المغرب	الرباط	الدار البيضاء	←
(Fields) حقول	↓	↓	↓	
	اسم الدولة	عاصمتها	أهم موانئها	←
سجلات (Records)	مصر	القاهرة	الأسكندرية وبورسعيد	←
	السعودية	الرياض	جدة	←
	المغرب	الرباط	الدار البيضاء	←
(Field) حقول	↓	↓	↓	
	اسم الدولة	عاصمتها	أهم موانئها	←
سجل (Record)	مصر	القاهرة	الأسكندرية وبورسعيد	←
	السعودية	الرياض	جدة	←
	المغرب	الرباط	الدار البيضاء	←

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Lesson 6

Edit and design images

Learning Objectives:	Strategy
By the end of the lesson, the student should be able to:	Dialogue and discussion – practical training
<ul style="list-style-type: none"> Identify some Image Editing software. Distinguish between different kinds of image files. Download image files from the internet. 	Teaching aids
	Electronic board – Student's Book – presentation

Warm up / What are the most popular image files?



Lesson Presentation

☼ **Image-editing software:** - is program that enables a user to create and edit pictures through many tools in a good, easy and fast way

→ There are many programs that you can use, some of them are:

CinePaint (O/S Linux)

PicsArt (O/S Android)

Paint.NET (O/S Windows)

→ There are several Types of image files that have different extensions like:

Bmp - gif - eps - jpg - pcx - png - wmf - tif - ..etc.

☼ Some types of pictures are briefly divided according to its processing inside the computer:

1-Vector Graphics: are based on mathematical expressions to represent images in computer graphics; they are **not affected by scaling** (enlarging or reducing their size) where image scaling doesn't reduce picture quality. Its small storage size; and their type such as eps, emf and wmf.

2-Raster Graphics: is a dot matrix data structure; are affected by scaling (enlarging or reducing their size) where image scaling reduce picture quality. Its large storage size; and their type such as raw, bmp, tiff, gif, jpg, png.

☼ The Characteristics of some pictures types: -

raw	gif	bmp
<ul style="list-style-type: none"> This type can't support the animated picture and its transparency. The size of the picture is very big when saving it compared with other types. This type can save a picture in high quality compared with <u>jpg</u> 	<ul style="list-style-type: none"> This type supports animation and transparency. It is inadvisable to use it in saving pictures of high number of colors and gradients colors; in order not to be distorted. It's advisable to use it for pictures that have small sizes. This extension is an abbreviation of (<u>Graphical Interchange Format</u>). 	<ul style="list-style-type: none"> It is a type of fixed picture files that support neither transparency nor animation, This type is mostly of a big size and high quality and high colors compared with gif. The .bmp extension is an abbreviation of (<u>Bitmap</u>).
jpeg	png	wmf
<ul style="list-style-type: none"> This type is one of the most famous and widely used types compared with others; where the team of (Joint Photographic Experts Group) has developed it, so it carries his name. This type has other extensions: <u>jpg</u> and <u>jpg</u>. Digital cameras support this type of extension doesn't support neither animation nor transparency, but it has 16 million colors. 	<ul style="list-style-type: none"> This type supports transparency and doesn't support animation. It handles million colors This extension is an abbreviation of (<u>Portable Network Graphics</u>). 	<ul style="list-style-type: none"> This type supports transparency and doesn't support animation It is based on mathematical expressions to represent images; this type is not affected by scaling (enlarging or reducing their size) and it is characterized by its small storage size.

Evaluation: -

Complete: -

There are several Types of image files that have different extensions like.....



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Lesson 7

Following Edit and design images

Learning Objectives:	Strategy
By the end of the lesson, the student should be able to:	Dialogue and discussion – practical training – cooperative learning
<ul style="list-style-type: none"> Add effects to picture Crop a part of a picture. Save picture files with different extensions. 	Teaching aids
	Electronic board – Student's Book – presentation

Warm up / What are the different between fixed and animated picture?

Lesson Presentation

✿ Set Picture size: –

To set picture size is to change the dimensions of a picture: (height–width) through the following steps:

- Download one of Image editing programs.
- Open file, Change the size of the file to suit the allocated area in the project, When you activate the picture, you find 8 points, through which you can change the **dimensions** of the picture.

✿ Add effects to pictures: –

To add a certain effect to the picture, this means we can add an effect to a certain part inside the picture; to be highlighted in the picture and attain certain objective of using this picture

✿ Crop out part of the picture: –

we use the cut tool (**CROP**) from the toolbar of the Image editing program.

✿ Saving a picture inside a file with a suitable extension:

After making the required modifications to the picture, **save** it with **file** name and with extension “**gif**” and saved it with the extension “**jpg**” inside the subfolder Maps in the main folder Atlas.

✿ Adding an image as a background in the project design: –

- 1– Choose the dimensions of the image to be designed, (width, height).
- 2– Use the available tools for editing and processing images for background design.
- 3– Suppose that the window dimensions for the project interface are: 800 pixels' x 600 pixels.
- 4– Adjust the dimensions of image design; using the Image Size or Resize tool.
- 5– Use the fill color tool, (Bucket Fill) and fill the specified area with a suitable color.
- 6– You can use Drawing tools and shapes available to design image.



✿ Animated picture: –

An animated picture is a collection of pictures that you have to insert one after the other in frames, inside a timeline. You adjust the interval between each frame; so that the pictures appear to be moving.

✿ Design an animated picture: –

- 1– Download one of the multimedia programs that help you create animated pictures.
- 2– Insert each picture inside a frame in a sequential order; inside the timeline.
- 3– Adjust the interval between each frame.
- 4– Press the Play button on the Monitor; the flag picture appears to be moving and waving like a flag.
- 5– Save this animated picture with Gif extension; in the subfolder "Pictures" under the main folder "Atlas".



Evaluation: -

Complete: - one of popular image files that can be inserted tools in the Visual Basic Language.....

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Lesson 8

Creating and manipulating Sound files

Learning Objectives:	Strategy
By the end of the lesson, the student should be able to:	Dialogue and discussion – practical training – cooperative learning
<ul style="list-style-type: none"> Identify some audio files formats (extensions). Recognize some of the audio editing applications. Download one of the sound editing programs. 	Teaching aids
	Electronic board – Student's Book – presentation

Warm up / What are the most popular sound files?

Lesson Presentation

Audio files: –

There are many audio files formats (extensions) such as: wav, wma, mp3.

The following identify the famous audio types: –

→ **Wave file format:** – is of **high quality**, and often used to store information about uncompressed raw audio data. (Original sound, which has not gone through any file format, however, due to the amount of disk space that these files take up it, is not common to be published or posted on Web sites. **WAV files are universal, they can be utilized on many operating systems**, and modified (compressed and converted to other file type of small size but with low quality) by many Audio editing programs, and WAV means (Waveform **audio**).



→ **Wma type:** – This type **is the higher quality and lower distortions type compared to .MP3** file, only few audio editing software and operating systems can support editing and manipulating (.wma) file format knowing that .WMA files stands for (**Windows Media Audio**).



→ **Mp3 type:** – (**small size , low quality compared to WAV**), MP3 does not have nearly the same amount of quality as WAV file format, the MP3 format uses compression which actually save space and make the file smaller, it is not suitable for retaining "**first generation**" archived files. Various audio editing software can support editing and manipulating MP3 file format.



There are many off-the-shelf applications that manipulate different file types, each program according to its related features, and some programs can convert from one file type to another.

In VB.net language, you can insert the appropriate controls in the (Toolbox) to play different types of Audio files.

Audio editing software: – are programs that include a collection of powerful tools to generate sounds, add audio effects, recording, editing and performing other audio processing that enable user to edit and process audio files in a great way, quick and easy

There are several programs that can be used for creating and editing audio files: –

□ (Audacity) (O/S Windows– Linux)

<http://audacity.sourceforge.net/>

□ (Wave Pad) (O/S Android)

<https://play.google.com/store/apps/details?id=com.nchsoftware.pocketwavepad>

Evaluation: -

Put (✓) or (x):

You can use one of the audio editor software to modify the dimensions of the image. ()

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Lesson 9

Following Creating and manipulating Sound files

Learning Objectives:	Strategy
By the end of the lesson, the student should be able to:	Dialogue and discussion – practical training – cooperative learning
<ul style="list-style-type: none"> ▪ Add changes on audio waveforms. ▪ Add effects on audio waveforms. ▪ Save audio files with appropriate format (extension). 	Teaching aids Electronic board – Student's Book – presentation

Warm up / How can you record a sound file and add effects on it?

Lesson Presentation

🌀 Create a sound file: –

First: before you start recording, answer the following questions:

- 1- What is the theme or topic you want to record?
- 2- What are the sentences that will be recorded?
- 3- What are the sound file time, and the intervals between each sentence?

Second: Start voiceover recording steps through the following:

- Make sure that the **microphone** is connected to your computer.
- Download audio recording program (using **Windows 7**, from the **Start** menu, choose **Accessories**, then **Sound Recorder**, using **Windows 8**, choose the **Start** screen).

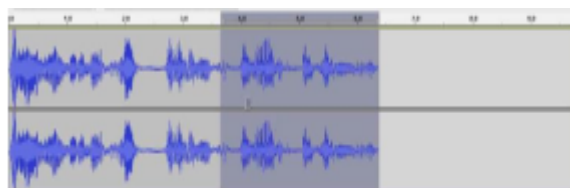
→ The Sound recording program appears.

- Start recording the required sentences
- Save the sound file .



Using Audio Editing programs; you can make the appropriate manipulation to audio files like:

- Delete a portion of an audio file.
- Cut a portion of an audio waveform, and paste it in another location on the waveform in the same file or into another sound file.
- Duplicate a portion of the audio waveform (clip).
- Add another audio file into the current audio file.
- Add effects to specific clips or to the whole audio file like: amplify or reduce the sound volume.



Evaluation: -

Put (✓) or (x):

You can use one of the audio editor software to duplicate a portion of the (clip) inside the audio file. ()

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Lesson 10

Creating and editing videos

Learning Objectives:	Strategy
By the end of the lesson, the student should be able to:	Dialogue and discussion – practical training – cooperative learning
<ul style="list-style-type: none"> Recognize some types of video files. Recognize some Video editing software. Download one of video editing software from the Internet 	Teaching aids Electronic board – Student's Book – presentation

Warm up / What are the most popular videos files?

Lesson Presentation

Video files formats

There are different video file formats like: **avi**, **wmv**, **gp**, **mp4**.

→ 3gp extension:

3gp video format produces a small file size of low quality; it is appropriate for mobile cameras and applicable with mobiles phones 'operating systems.

→ Avi extension:

Avi video format produces a large file size of high quality compared with other formats; Avi video format is appropriate to computers and video cameras.

→ Mp4 extension:

Mp4 video format produces average file size of high quality compared with 3gp extension; it is appropriate for Mp4 devices

In VB.net language, you can insert the appropriate controls in the (Toolbox) to run different types of video files.

There is much video editing software available through the Internet that can be accessed from the following links:

Kdenlive (O/S Linux)

<http://kdenlive.org/>

Video Maker (O/S Android)

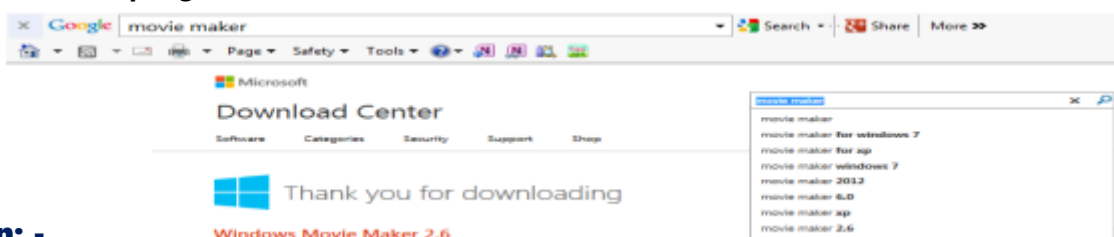
<http://play.google.com/store/apps/details?id=yong.app.videoeditor>

Movie Maker (O/S Windows)

<http://windows.microsoft.com/en-us/windows/get-movie-maker-download>

Download Movie Maker Program

- Follow the displayed selections to download Movie Maker program and to install it on your computer.
- Open Movie Maker program.



Evaluation: -

Put (✓) or (x):

You can use one of the audio editor software to duplicate a portion of the (clip) inside the audio file. ()

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Lesson 11

Following Creating and editing videos

Learning Objectives:	Strategy
By the end of the lesson, the student should be able to:	Dialogue and discussion – practical training – cooperative learning
<ul style="list-style-type: none"> Add effects to video clips. Add transition effects between video clips. Save video clips in a file with appropriate (extension) 	Teaching aids
	Electronic board – Student's Book – presentation

Warm up / How Can you create a video file?

Lesson Presentation

□ Create a video file about "the touristic attractions in Egypt": -

To create a video file about "the touristic attractions in Egypt"; follow the next steps: -

First: - Import files (images, audio, video): -

1. Import images files:.

Import image files for the most important "attractions in Egypt" from the sub folder "Pictures" under the main folder "Atlas"

2. Import the audio file:.

Import the sound file of "attractions in Egypt" from the sub folder "Anthem" under the main folder "Atlas"

Second: - Modify video clips (adding effects, writing texts): -

Modify video clips (Add effects – writing texts):.

1. To set an effect on the image:

Choose an effect and put it over one of the images in the Time Line, and then preview the image after adding the affect.

2- To set an effect on transitions between images clips:

Choose one of the effects and then place it between the video clips in the video Time line

3- To put Titles or Texts to different video clips:

Type the title of the video "Attractions in Egypt", this title appears in the Time line bar.

Third: - Save video clips within a file: -

To save the video file on your computer:

-Locate the storage device.

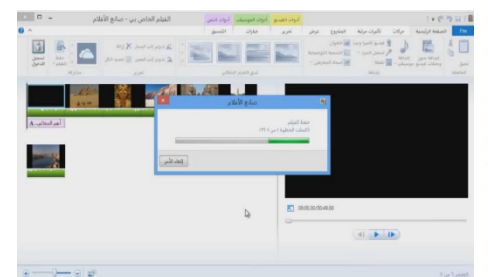
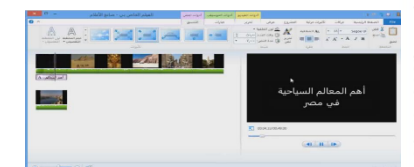
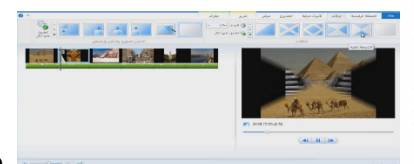
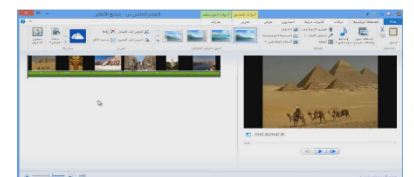
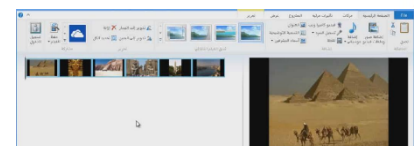
-Save the file with the filename "مصر" in the sub folder "Videos" under the main folder "Atlas".

-Follow the rest of the saving steps that ends with displaying the video.

Evaluation: -

Complete:

The smaller video file is.....



Date					
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Lesson 12

Establish Project's interface

Learning Objectives:	Strategy
By the end of the lesson, the student should be able to:	Dialogue and discussion – practical training – cooperative learning
<ul style="list-style-type: none"> Identify the purpose of designing and creating a project. Design a user interface for the project. Specify the controls that you want to use in the user interface. 	Teaching aids Electronic board – Student's Book – presentation

Warm up / How Can you create and design project's interface?

Lesson Presentation

□ Create and design an interface for "(Electronic Arabic Atlas)" program: –

To create and design an interface; follow the next steps:

- Open **Visual Studio**. net available on your computer.
- Create a new project named "(Electronic Arabic Atlas)" program .
- Set the **Controls**, as shown in the shown figure:

On window form **1Form**; **10 Label** controls and **2 ComboBox** controls, **2 Picture Box** controls and **1 Button** control and **1 WindowsMediaPlayer** are placed.



□ Adjust the property Name of some of the Controls displayed on Form1 window , as shown in the following table:

Name	Control
cmbbxContinent	ComboBox1
cmbbxState	ComboBox2
picbxMap	PictureBox1
picbxFlag	PictureBox2
lblDC	Label6
lblPorts	Label7
lblWR	Label8
btnStop_play	Button1
WMPlayer	AxWindowsMediaPlayer1

Note: –

The control **AxWindowsMediaPlayer** does not exist in the (**Toolbox**); it will be combined to this (**Toolbox**) as described in the steps below:

- Right Click using the mouse in the Toolbox and select (**Choose Items**).
- A dialog box appears displaying much tabulation.
- Select (**com components**) tabulation; then choose (**Windows Media Player**); and to close press (**OK**); this tool will be added to the (**Toolbox**).

Evaluation: -

Put (✓) or (x):

V.Basic .net language allows adding new Controls to the (Toolbox) controls. ()

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Lesson 13

Following Establish Project's interface

Learning Objectives:	Strategy
By the end of the lesson, the student should be able to:	Dialogue and discussion – practical training – cooperative learning
<ul style="list-style-type: none"> Specify the controls that you want to use in the user interface. Set the properties of the controls. Add a control to the Toolbox. 	Teaching aids
	Electronic board – Student's Book – presentation

Warm up / How Can You Set control's properties?

Lesson Presentation

□ To Set up a project; you should:

- (1) Determine the purpose of the project.
- (2) Collect and organize data for the project; the same thing you did to collect data for " (Electronic Arabic Atlas)", where you created folders as follows: (Data from each country – the Flag of each country – A Video for "Tourist Attractions in Egypt" – An Anthem for each country – the Map of each country).
- (3) Design the User Interface of the project GUI.
- (4) Select the controls that you want to use in the user interface (on the window form).
- (5) Set the properties of the controls, such as:

Control	Name
ComboBox1	cmbbxContinent
ComboBox2	cmbbxState
PictureBox1	picbxMap
PictureBox2	picbxFlag
Label6	lblDC
Label7	lblPorts
Label8	lblWR
Button1	btnStop_play
AxWindowsMediaPlayer1	WMPlayer

(5.1) Notice that the name of the control reflects its content such as: cmbbxState where cmbbx indicates that the control is a **ComboBox** and State indicates that the control includes the name of the country.

(5-2) Specify the controls that appear on the User Interface (**window form**), using the code:

Object.Visible = True

Specify the other controls which does not appear on the User Interface (**window form**), using the code:

Object.Visible = False

(5-3) Adjust the SizeMode property of the **Picture Box** control, using the code: PicMap.

SizeMode = StretchImage

(6) In VB.NET, you can add other controls to the available controls in the (**Toolbox**).

Evaluation: -

Complete: -

The control used to play sound and video files are.....

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Lesson 14

Reading data from an Excel sheet

Learning Objectives:	Strategy
By the end of the lesson, the student should be able to:	Dialogue and discussion – practical training – cooperative learning
<ul style="list-style-type: none"> Write the code to open a communication channel. Declare the variables needed to open a communication channel. Write the code for loading an Excel file into memory. 	Teaching aids
	Electronic board – Student's Book – presentation

Warm up / How Can You Reading data from an Excel sheet using Visual Basic.net?

Lesson Presentation

□ While writing program code in Visual Studio.NET, you will use certain terms and apply the main concepts that you studied last year. Also you will learn some new terms that follows:

• **ADO (ActiveX Data Object):** - It is an advanced technology that can be used to design "Controls" not as ordinary tools; but "Controls" that get access to databases over appropriate applications and develop applications and Programming Projects i.e (Windows Applications and Web Application) that manipulate data from a diversity of databases. Where; ADO.NET is a set of classes that provides access to multiple data sources; such as "Microsoft SQL Server, Microsoft Access, and Oracle ". These software's can create/manipulate databases; ADO.NET is a part of the Framework.

• **Class:** - A (Class) is the blueprint/ plan / template, from which the individual objects, are created. It is the blueprint that describes the details which any object takes (its Properties, Methods and, Events); and are derived from the (Class).

• **Object:** - An Object is characterized by:

- 1- The **properties** that describe and specify an Object.
- 2- The **events** that occur on an Object.
- 3- The **methods** or actions that an object can perform; upon the occurrence of a particular event.

An (**Object**) is the basic constructive element in Object Oriented Programming; it is created from a defined class. Thus an (**Object**) exists only after a certain (**Class**) has been created.

• **Namespace:** - A Namespace contains a set of related classes that can be used when needed.

• **Framework:** Is the platform for Visual Studio. NET applications that :

- 1- Enables developers to create applications like (Desktop applications , Web applications and Mobile applications).
- 2- Provides a development environment for running all applications.

• **The Framework is composed of :**

- 1- The execution engine (**CLR**) Common Language Runtime.
- 2- The .NET class libraries (**System Class Libraries**).
- 3- (**Compilers**).
- 4- Other elements.

• **SQL (Structured Query Language) :-** It is a programming language designed for managing database files.

Select: - It is one of the SQL statements used to retrieve records from a table or from multiple tables in the database.

Evaluation: -

Complete: -is used to retrieve records from a table or from multiple tables in the database.



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Lesson 15 Revision

Learning Objectives:	Strategy
By the end of the lesson, the student should be able to:	Dialogue and discussion – cooperative learning
<ul style="list-style-type: none"> Identify the most important terms of the lesson. Solve the student's book exercises. Write the project's code in right way. 	Teaching aids
	Electronic board – Student's Book – presentation

Warm up / What are the most important basics of Atlas project?



Lesson Presentation

Put (✓) or (x):

- To create a Folder, use the left button of the mouse then choose New then Folder then write the name of the folder. ()
- www.Facebook.com is an example for search engines. ()
- Wikipedia's are a perfect references, because they depends on more than one type in displaying the information, like articles – tables – pictures – shapes and maps. ()
- To delete a folder, you must select it, then choose delete from Submenu ()
- Wikipedia's are sorted ascending or descending ()
- It is a disadvantage for Wikipedia's ()
- that information is huge and produced in ()
- different shapes or forms. ()
- To search in search engines, you type the key – word such "Egypt Map" and type the form you need it (map – picture). ()
- To rename a file, you must select it, and then choose rename from Submenu. ()

Choose between brackets:

- Wikipedia's can be sorted by (ascending – scientific classes – descending) in order to easily get the information.
- Internet sites which help in search service are called (search engines – Wikipedia – operating systems).
- The most famous encyclopedia is (yahoo – Google – Wikipedia).
- To delete a file, you select it then choose (New – Rename – Delete) from the submenu.
- The advantages of Encyclopedias are (search easily – fast – different shapes of information – all previous).

Evaluation: -

Evaluate student's answer.